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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,901	07/27/2005	Jong-Hun Kim	YOM-0099	8876
23413	7590	01/25/2006	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			BOYKIN, TERRESSA M	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 01/25/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/500,901	Applicant(s) KIM ET AL.	
	Examiner Terressa M. Boykin	Art Unit 1711	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 7-27-06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7-7-04</u> . | 6) <input type="checkbox"/> Other: _____  |

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 15-25, 27-32, 35,36 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5717056 see col. 3 line 45 through col. 6 line 33, col. 7 line 24 through col. 8 line 15, example 1 and claim 1; USP 4948871 see abstract, col. 10-19 line 57, col. 23 line 62 and example 1 and claim 1 each in view of JP 2000080171.**

**USP 5717056** discloses a solid-state polycarbonate formation comprises an initial step of converting a precursor polycarbonate to an enhanced crystallinity precursor polycarbonate and a second step of polymerizing said enhanced crystallinity precursor polycarbonate in the solid state. Several options are employed. These include modifying the precursor polycarbonate by contact with a dihydroxy compound or diaryl carbonate, conversion of the precursor polycarbonate to the enhanced crystallinity polymer by contact with at least one compound selected from the group consisting of alkali metal hydroxides, tetraalkylammonium hydroxides, tetraalkylammonium carboxylates, tetraalkylphosphonium hydroxides and tetraalkylphosphonium carboxylates, and conducting the solid state polymerization in the presence of a catalytic amount of at

Art Unit: 1711

least one tetralkylammonium or tetraalkylphosphonium carboxylate. The preferred tetralkylammonium compounds are tetramethylammonium maleate and tetramethylammonium hydroxide. Polymerization may be conducted in the presence of a solvent resistance-imparting monomer such as hydroquinone or resorcinol or a branching agent such as 1,1,1-tris(4-hydroxyphenyl)ethane.

**USP 4948871** discloses a crystallized aromatic polycarbonate having a weight average molecular weight of from 6,000 to 200,000 and having a terminal hydroxyl group content of not greater than 0.03% by weight based on the weight of the polycarbonate is effectively produced by first heating a mixture of a dihydroxydiaryl compound comprising at least 85 mole % of a dihydroxydiaryl alkane with a diaryl carbonate to prepare a prepolymer having a weight average molecular weight of from 2,000 to 20,000 and having terminal aryl carbonate groups in an amount of greater than 50 mole %, based on the total number of moles of all the terminal groups of the prepolymer, secondly crystallizing the prepolymer and finally subjecting the crystallized prepolymer to solid-state polymerization. The crystallized aromatic polycarbonate does not contain impurities, is colorless and has excellent properties such as resistance to heat and to boiling water. Therefore, the polycarbonate is advantageously used as engineering plastics.

Each of the references discloses a method for preparing high molecular weight polycarbonate resins prepared from the same components as claimed by applicants except for the specific type of drying chamber, which includes the spraying method as disclosed herein.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the spraying to the process above in lieu of the vacuum drying chamber since such is commonly known in the art to be a relative stable process for producing polycarbonates. Note that **JP 2000080171** discloses a process which provides a method for simply preparing aromatic polycarbonate resin granules without forming fibrous substances and agglomerates of the granules in the granulation by the spray dryer system using an inert gas as the heating medium, particularly a method for preparing aromatic carbonate resin granules with a reduced amount of foreign matters which can be employed in optical applications such as a optical fiber application, which require a very high purity.

Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by USP 5717056 see col. 3 line 45 through col. 6 line 33, col. 7 line 24 through col. 8 line**

Art Unit: 1711

**15, example 1 and claim 1; USP 4948871 see abstract, col. 10-19 line 57, col. 23 line 62 and example 1 and claim 1 .**

Each of the references discloses a high molecular weight polycarbonate prepared from the same components as claimed by applicants. No specific drying or spraying steps are included in applicant's claims. Disclosed molecular weights are expressed differently and thus may be distinct from those claimed, it is incumbent upon applicant(s) to establish that they are in fact different and whether such difference is unobvious. In view of the above, there appears to be no significant difference between the reference(s) and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

### **Correspondence**

**Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site ([www.uspto.gov](http://www.uspto.gov) <<http://www.uspto.gov>>), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <<http://www.uspto.gov/ebc/index.html>> or 1-866-217-9197.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

Art Unit: 1711

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is ( 571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb

  
Examiner Terressa Boykin  
Primary Examiner/Art unit 1711

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